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Transition economy and market factors: the influence of advertising on customer satisfaction in Serbia

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ABSTRACT
Transition economies often face various issues in their socio-economic structures. Several studies analysed the differences and similarities between traditional capitalist economies and transition economies. In this research, advertising and customer satisfaction, two crucial market-driving factors, are measured in the emerging economy of Serbia. Additionally, perceived quality, brand credibility and brand relationship quality are included in the study as mediating factors. Four hundred thirty-two (432) customers and consumers participated in the survey. The findings indicate that advertising has a strong positive correlation with customer satisfaction. This provides support and invites future research in the domain of emerging economies when it comes to key market factors such as advertising and customers' post-purchase experiences.

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1. Introduction

The issues of countries in economic transition are plentiful. It is certain that transition from socialism to a free market economy brings a lot of struggles and challenges. The Republic of Serbia (referred to as Serbia later on in the article) as an emerging economy is on a stable road to rise from a turbulent transition process and establish a free-market economy. There are positive accomplishments made by Serbia regarding transitional changes. This includes the implementation of International Financial Reporting Standards (IFRS) (Obradović, Čupić, & Dimitrijević, 2018) and increased monetary effectiveness (Živkov, Njegić, Papić-Blagojević, & Petronijević, 2016). In general, the overall economic status of the country is better compared to the early post-socialist period where there was more uncertainty for economical sustainability as noted in the research conducted by Vujošević, Zeković and Maričić (2012). However, a large number of enterprises struggle to maintain a competitive position on the international market. The lack of competitiveness of Serbian enterprises may

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be the result of the domestic economic situation in the country. Enterprises often struggle to implement a quality management system, due to high costs and the required participation of managers (Cockalo, Djordjevic, Sajfert, Spasojevic-Brkic, & Nikolic, 2012). This may further lead to lower-quality products and services, negatively affecting customer satisfaction.

Furthermore, economic stability heavily relies on modern market dynamics. Products and services, consumers and customers are the main driving forces of the free market. In an industrialised, capitalist society, market heterogeneity, unbranded competition, shortage of resources, and socio-political governance differ from those present in transitional economies (Sheth, 2011). Serbia certainly belongs to the latter.

In this paper two main market factors are analysed, advertising (in the context of perceived advertising) and customer satisfaction. In the research of Cockalo, Djordjevic, and Sajfert (2011) it was noted that a large portion of enterprises used feed-back information an effective tool for communicating and developing relationships with customers. Now, this study analyses the possible impact of perceived advertising on customer satisfaction. The main idea is to determine the influence of perceived advertising of a certain brand on customer satisfaction in a transition economy. There is evidence that different cultures can have different metrics when it comes to market factors. This includes customer satisfaction (Sajid Khan, Naumann, Bateman, & Haverila, 2009), beliefs and attitudes in online advertising (Wang & Sun, 2010), branding (Bian & Forsythe, 2012), and overall advertising (Terlutter, Diehl, & Mueller, 2010). Therefore, the aim is to analyse how perceived advertising affects customer satisfaction as these are two important driving factors on the market.

This research does not address specific product categories, or specific advertising campaigns. A controlled and structured online survey was used for obtaining data from various brand users/customers. The survey was evenly distributed across cities, towns and villages in Serbia. There were 432 respondents to the survey. The paper is divided into four main sections. First, a theoretical background on the measured constructs is provided. Second, the research methodology is described in more detail. Third, the results of the data analysis are presented. In the fourth section, the results are discussed. Based on the discussion, conclusions are drawn and future research is suggested.

2. Theoretical background

2.1. The importance of advertising

Advertising has an important role in brand development, as it positively influences consumers to contribute to brand extensions (Martínez, Montaner, & Pina, 2009). Advertising can be executed in two forms: informational, and emotional (Dens & De Pelsmacker, 2010). Informational advertising includes distributing information about products and/or services, while emotional advertising focuses on the consumers' feelings. Ads that evoke positive and negative emotions may have similar effects on consumers when it comes to their buying behaviour (McKay-Nesbitt, Manchanda, Smith, & Huhmann, 2011). Advertising is a strong tool for communicating the emotional and functional values of a brand (Bakator, Borić, & Paunović, 2017; De Chernatony,

2010). However, it is also noted that older consumers are more interested in rational, informational ads, rather than emotion-provoking ads. Advertising is not only an influential tool for consumer behaviour manipulation, but an informational construct as well (Moorthy & Zhao, 2000). Early research of Agrawal (1996) argued that advertising has various functions, including strengthening customer loyalty, promotions regarding products and prices, and attracting consumers who are loyal to other brands. Innovative advertising strategies must achieve adequate design, execution strategy, creative strategy, and capture consumers' attention (Buil, de Chernatony, & Martínez, 2013). It is evident that advertising can develop and communicate favourable and unique brand image, and brand associations (Keller, Parameswaran, & Jacob, 2011). Some of the relevant articles for this study discuss the imperative nature of advertising for satisfying customers (Doraszelski & Markovich, 2007), the power of advertising to develop customer loyalty (Anderson, Fornell, & Mazvancheryl, 2004), and the role of advertising in the economy and on the market (Chioveanu, 2008).

Based on the above addressed findings, it can be proposed that advertising has an influence on customers. Through this research the strength of this influence is measured. Perceived advertising metrics may differ from objective advertising campaign metrics. However, in this study the campaign metric is not observed, as it requires internal data from the organisation that is running the campaign. Therefore, in this research the survey items measure perceived advertising, rather than objective advertising.

2.2. Customer satisfaction

Boulding (1990) described customer satisfaction as post-purchase evaluation of products or services, and the degree that it fulfilled the needs and expectations of the customer. Satisfaction of customers is dependent on price, while product quality is not dependent on customer satisfaction (Anderson, Fornell, & Lehmann, 1994). However, Hu, Kandampully, and Juwaheer (2009) discussed that high-quality products, and high-quality services that are delivered to customers, can affect the development of higher customer satisfaction. This satisfaction further results in a stronger company image, and consumer retention. Furthermore, in the findings of Torres-Moraga, Vasquez-Parraga, and Zamora-Gonzalez (2008) customer satisfaction, and customer loyalty showed a strong relationship. High customer satisfaction levels, contribute to loyalty and positively influence consumer purchase decisions (Eshghi, Haughton, & Topi, 2007). Similarly, Deng, Lu, Wei and Zhang (2010) noted that high degree of satisfaction is important for product, and service differentiation, and for strong customer relationship development. Companies are at risk of losing market share if they cannot satisfy their customers (Muyammil, Haffey, & Riaz, 2010). Indeed, dynamic markets with competitors require companies to develop good relationships with customers (Đorđević, Ćoćkalo, & Bogetić, 2016).

It is evident that customer satisfaction has an enormous potential as a market factor when it comes to competitiveness. Customer satisfaction affects the economy indirectly through ensuring that various market segments are functioning well. Without the trade of products, services and financial resources, the economy would

tremendously suffer. Relevant articles for this study noted the importance of customer satisfaction and its impact on firm value (O'Sullivan & McCallig, 2012), and the positive impact of satisfied customers on financial and market performance (Williams & Naumann, 2011). In well-developed economies, customers dictate the competitiveness of companies on the market. If the needs of customers are not met, there is big chance that they will turn to other companies.

2.3. Brand relationship quality and Brand credibility

Brand personality has an evolving effect on consumer–brand relationships, where brands with stronger personality traits result in higher-quality relationships between consumers and brands (Fournier & Alvarez, 2012). Early research of Fournier (1998) described brand relationship quality as the strength, and dynamic dimension between consumers and brands. McAlexander, Schouten, and Koenig (2002) described brand relationship quality through the concept of brand resonance. This concept includes the relationship intensity between the consumers and a brand, where the relationship metric is the frequency of purchase. Brand relationship quality reflects the affiliation of consumers towards a brand (Huang, Fang, Huang, Chang, & Fang, 2014). Brand relationship quality is a rich concept that includes emotional attachments of consumers, motivations, norms and interactions between consumers and brands (Kim, Park, & Kim, 2014). In addition, in the same article it is noted that brand relationship quality is deeper and more complex than simple brand evaluations or consumer behaviour analysis. These two studies (Huang et al., 2014; Kim et al., 2014) are relevant to this research, as brand relationship quality is observed as a mediating factor in the analysis.

Further, brand relationship quality has three main dimensions that have interrelated connections between each other. These are customer satisfaction, trust and commitment (Papista & Dimitriadis, 2012). Next, for this research it is important to address previous studies in the domain of brand credibility. Some of the relevant studies for this research include the discussion of Kemp and Bui (2011) who presented brand credibility as a major influential factor on consumer behaviour, and consumer decision process. Other relevant studies include the findings of Netemeyer et al. (2004) who argued that consumers are more likely to pay a higher price for products and services under strong credible brands. Additionally, the research of (Sung & Choi, 2010) discussed that customers once loyal to one brand are less probable to go to other brands. Why is this important for this research? Well, if brand loyalty or brand relationship quality has such an impact on customer behaviour, then it can be suggested that it has indirect influence on market performance and overall market dynamics as well.

Brand credibility can be viewed as a concept that includes trustworthiness, expertise and likeableness (Li, Wang, & Yang, 2011). Kwok, Uncles, and Huang (2006) suggested that strong brand credibility positively correlates and influences brand equity. Complementary results were found by Maehle, Otnes, and Supphellen (2011) where they stated that consumers, who trust the brand, develop the sense of credibility towards that brand, thus resulting a positive influence on consumer behaviour. When

companies practice corporate social responsibility, it is important that the consumers view the company's brand as a credible one (Torres, Bijmolt, Tribó, & Verhoef, 2012).

As mentioned before, consumer behaviour is highly influenced by various market factors (Kotler & Keller, 2016b). Brand credibility is certainly one of the key influential elements that impacts the consumers' decision making processes (Hoyer & Brown, 1990). Brand credibility is often used as a market value enhancer, where the goal is to establish a more competitive market position (Kotler & Keller, 2016a).

Now, in this study, brand relationship quality, and brand credibility are measured as mediating constructs that provide support to the main idea of the investigation.

2.4. Perceived quality

In the research of Chi, Yeh, and Yang (2009), perceived product quality is viewed as the consumers' perception of the product's benefits, functionality and overall subjective feeling of quality. In addition, perceived quality can be defined as a consumers' subjective perception about product price or service price, functionality, and quality, weighed against similar products and services offered by other companies (Caruana, Money, & Berthon, 2000). Perceived quality is often regarded as a form of product or service evaluation by the consumer. This evaluation is conducted according to the consumers' wishes, expectations, and needs (Snoj, Pisnik, & Mumel, 2004).

It is interesting that perceived product quality can be measured, while perceived service quality is hard to analyse, and it is hard to define the psychological processes behind the consumers' decisions (Wolfgang & Chacour, 2001). Regarding perceived service quality, Žabkar, Brenčič, and Dmitrović (2010) noted that there are two dimensions when it comes to measuring services. First, there is technical quality that refers to the main outcome of the measurement. Second, there is functional quality that includes the processes that take place in order to achieve a specified goal. Some relevant studies for this article discussed the influence of perceived quality on customer satisfaction (Othman, Kamarohim, & Nizam, 2017), and how perceived quality affects customer behaviour that further reduces costs and increases profit margins for companies (Hallak, Assaker, & El-Haddad, 2018).

In sum, it is evident that brand relationship quality, brand credibility, and perceived quality as mediating factors have certain influence on the economy. This study investigated the relationship between these constructs/market factors, in order to provide an insight on how these relationships exist in a transitional emerging economy. In the next section the research methodology is described.

3. Research methodology

3.1. Research framework and hypotheses

In this research, advertising and customer satisfaction, as two main market-driving factors, were analysed. In addition, to include other key driving forces of market dynamics, the research included perceived quality, brand credibility, and brand relationship quality as mediating constructs. On Figure 1 the framework of the research is presented.

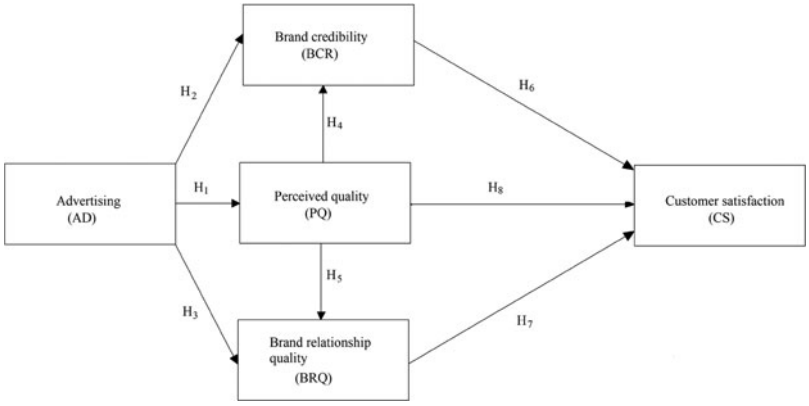

Figure 1. Research framework. Source: Author.

In accordance with the research framework and the main idea of this research, the following hypotheses are suggested:

- H_0: Perceived advertising by customers is not in a relationship with customer satisfaction.
- H_a: Perceived advertising by customers is in a positive relationship with customer satisfaction.

As previously mentioned, this study includes mediating constructs which are considered important for the research process. In order to investigate the internal relationships between these measured constructs, the following auxiliary hypotheses are proposed:

- H1: Perceived advertising is positively correlated to perceived quality
- H2: Perceived advertising is positively correlated to brand credibility.
- H3: Perceived advertising is positively correlated to brand relationship quality.
- H4: Perceived quality is positively correlated to brand credibility.
- H5: Perceived quality is positively correlated to brand relationship quality.
- H6: Brand credibility is positively correlated to customer satisfaction
- H7: Brand relationship quality is positively correlated to customer satisfaction.
- H8. Perceived quality is positively correlated to customer satisfaction.

3.2. Sample

The research was focused on the population of Serbia. A web survey was distributed evenly across the country aiming large cities and medium to small towns and villages. The survey was distributed through social media platforms. However, clearly defined settings were used for targeting potential participants to ensure a structured sample. These settings are presented in Table 1.

Furthermore, the details of the obtained sample are presented in Table 2. Every participant was asked about their place of residence. This information was used only

Table 1. Settings used to target the population and to obtain the sample.

Setting	Value
Geographic area	Belgrade, Subotica, Niš, Novi Sad, Zrenjanin, Kragujevac, Kovačica, Debeljača, Crepaja, Melenci and other cities, towns and villages in the Republic of Serbia. It was ensured that the obtained sample is as representative as possible.
Age	15–65 or older
Gender	male and female
Education (acquired or currently enrolled)	elementary and secondary school, high school, undergraduate studies, graduate studies
Employment	employed, un-employed, student, retired
Number of reached people	approximately 30.000
Number of completed surveys	432
Actions taken to ensure sample structural integrity	The online survey was voluntary and anonymous in nature. However, to ensure that the sample represents the population every individual participant was checked and the survey distribution was ended when certain sample heterogeneity was achieved. Further, double submissions were excluded from the data analysis. The sample size of 432 is not much given the population of Serbia. However, the variety of participants from different age groups is sufficient for obtaining valuable data.

Source: Author.

Table 2. Obtained sample details.

	$N = 432$	% of total
Gender		
Male	165	38.2
Female	267	61.8
Age		
18 and younger	107	24.8
19–26	187	43.3
27–35	61	14.1
36–45	55	12.7
46–55	12	2.8
56–64	9	2.1
65 and older	1	0.2
Employment		
Employed	130	30
Unemployed	50	11.6
Student	250	57.9
Retired	2	0.5
Education		
Elementary and secondary education	23	5.3
High school	223	51.6
Undergraduate degree	154	35.7
Master's degree	29	6.7
Magister degree	/	/
Ph.D. degree	3	0.7

Source: Author.

for ensuring that there is a large coverage of the surveys from different places across the country.

3.3. Survey design

A seven-point Likert scale was used for every item in the survey. There were 23 items grouped in the following manner: advertising (7 items), perceived quality (4 items),

Table 3. Survey items.

Dimension/Construct	Items in the survey
Advertising (AD)*	I think this brand is strongly advertised.
	I think that this brand spends more on advertising compared to similar brands.
	I notice that ads often portrait this brand.
	Ads for this brand are creative.
	Ads for this brand are original.
	I think this brand is more often advertised than other brands.
	I often encounter ads for this brand on the Internet.
Perceived quality (PQ)	This brand is worth every penny.
	This brand offers great quality for the price.
	This brand satisfies my needs for quality.
	Overall this brands offers high-quality products.
Customer satisfaction (CS)	The products from this brand satisfy my needs.
	I feel good when I purchase a product from this brand.
	I don't have regrets after purchasing this brand.
	I think this brand is great.
Brand relationship quality (BRQ)	This brand is honest.
	This brand matches my character.
	My image and brand's image are complementary.
Brand credibility (BCR)	This brand is reliable.
	This brand is competent.
	This brand has integrity.
	This brand knows its customers.
	This brand always makes good products.

*Advertising as a construct was measured as 'perceived advertising' rather than evaluating objective advertising campaigns. The research focuses on the influence of advertising on customer satisfaction in the context of market factors, and market dynamics.
Source: Author.

customer satisfaction (4 items), brand relationship quality (3 items), and brand credibility (5 items). The survey was designed in accordance with similar research in this domain (Buil, Martinez, & Chernatony, 2013; Forsido, 2012; Habibi, Laroche, & Richard, 2014; Mishra, Bhusan, & Dash, 2014; Mosavi & Kenarehfard, 2013; Zhang & Luo, 2016), and in accordance with credible books of research scales by the authors Bruner (2013) II and Zarantonello & Veronique (2016). According to (Brown, 2011), this type of survey is adequate for the measurement of the mentioned market factors. The survey items used for this research are presented in Table 3.

Additionally, the survey included several questions regarding the age, gender, education, employment and place of residence of the participants. Age, gender and education were used as controls for the regression analysis. Further, the names, e-mail addresses, phone numbers, and income information of the participants were not collected. At the beginning of the survey, the participants were instructed to choose a brand from a given list, or to add/write down a brand of their choice. Product categories were not introduced. This randomised approach mitigates potential problems regarding endogeneity.

After the survey was designed, a print-out version, and an online version of survey was created. The print-out version survey was not heavily distributed, and the majority of the customers participated online. Through the Google Forms service, and social media platforms, the online surveys specifically targeted the population of Serbia. These data were stored within the Google Spreadsheets service. Afterwards the data were exported for further analysis.

The data processing included descriptive statistics, correlation analysis, multi-collinearity statistics, regression analysis, heteroscedasticity analysis, a *t*-test through re-

Table 4. Results of descriptive statistics.

Descriptive statistics					
Dimension	N	Min.	Max.	Mean (μ)	Standard deviation (σ)
Advertising (AD)	432	1	7	4.46	1.70
Perceived quality (PQ)	432	1	7	4.48	1.69
Brand credibility (BCR)	432	1	7	4.10	1.38
Customer satisfaction (CS)	432	1	7	4.39	1.56
Brand relationship quality (BRQ)	432	1	7	4.36	1.59

Source: Author.

sampling, and a reliability test. The obtained data from these analyses was used to determine in what degree does advertising influence customer satisfaction in a transitional economy. In the next section the obtained results are presented.

4. Research results

The first step in data analysis was descriptive statistics. For every measured dimension the sample size, the minimum and maximum values of the answers, the mean values, and the standard deviation values are presented. Results of the descriptive statistics are presented in Table 4.

Next, a Spearmans's correlation analysis was conducted on the mean values of the measured constructs. It was shown that Spearman's correlation analysis is a better fit for ordinal data compared to Pearson's correlation analysis. The results are presented in Table 5.

According to the results presented in Table 5, it can be seen that there is a strong positive correlation between the measured market factors. The highest correlation value (0.712) is between brand credibility (BCR) and customer satisfaction (CS). The lowest correlation value (0.566) is between perceived quality (PQ) and brand relationship quality (BRQ). Nevertheless, the values are high and they indicate a medium to strong positive correlation. In addition, the data were tested for multi-collinearity. The results of the multi-collinearity statistics are presented in Table 6.

There are no formal values that would definitely indicate multi-collinearity. However, values over 2.5 can suggest multi-collinearity. In this model, the values are close to 2.0 and a little over of 2.0. Now, based on these results it is safe to assume that there is no multi-collinearity among the observed variables.

Further, regression analysis was conducted in order to determine the relationship between the observed market factors. The regression was addressed through three different approaches. In the first regression all the mediating constructs were included. The results of the regression analysis are given in Table 7.

For this regression, customer satisfaction was observed as a dependent variable, while advertising, brand credibility, perceived quality, and brand relationship quality were observed as independent variables. The R^2 value of 0.658 suggests a strong relationship between the observed market factors. The β values indicate that there is an influence of the independent variables on the dependent variable. The p-values and the F values also indicate relationship between the analysed constructs. To ensure the credibility of these results, a second regression model was developed with separate regressions for each mediating construct. The Durbin–Watson statistic (DW)

Table 5. Results of the correlation analysis.

Correlation analysis	Advertising (AD)	Brand credibility (BCR)	Perceived quality (PQ)	Brand relationship quality (BRQ)	Customer satisfaction (CS)
AD	1.000*				
BCR	0.595*	1.000*			
PQ	0.598*	0.573*	1.000*		
BRQ	0.581*	0.607*	0.566*	1.000*	
CS	0.671*	0.712*	0.636*	0.651*	1.000*

*Significance: 5%.
Source: Author.

Table 6. Results of the multi-collinearity statistics.

Multi-collinearity statistics	AD	BCR	PQ	BRQ	CS
Tolerance	0.466	0.607	0.573	0.485	0.521
Variance Inflation Factor (VIF)	2.146	1.649	1.746	2.063	1.917

Source: Author.

Table 7. Results of the regression analysis with all the mediating constructs.

Regression analysis								
Dependent	Independent	β	p-value	S. Error	R^2	F	F Sig.	DW
CS	AD	0.311	<0.0001	0.199	0.658	204.588	<0.0001	2.028
	BCR	0.445	<0.0001	0.061				
	PQ	0.205	0.0003	0.056				
	BRQ	0.279	<0.0001	0.060				

Source: Author.

value of 2.028 indicates a practically non-existent autocorrelation between the observed variables.

The second approach to regression was based on a model which has the following form: $CS = \alpha 0 + \alpha 1 \cdot AD + \alpha 2AD \cdot z + x\gamma + \epsilon$; where z = BCR, PQ, BRQ are presented as separate regressions. For this model, in order to verify the results, an ordinary least squares (OLS) regression analysis and an ordered regression analysis were conducted. The results of the OLS regression analysis are presented in Table 8.

The regression analysis included two key market factors (advertising and customer satisfaction), as well as three additional constructs (brand credibility, perceived quality, brand relationship quality). For every construct (BCR, PQ, and BRQ) a separate regression was conducted. There are no major differences between the regression results (R^2 and Adjusted R^2) regardless of which mediating construct (BCR, PQ or BRQ) is included. The means squared error (MSE) values show that the model can provide a solid basis for predicting the relationships between the observed variables. The root mean squared error (RMSE) values are more diverse. Overall, the PQ observations resulted in higher values compared to BCR. High RMSE values are also obtained with the BRQ mediating construct. Now, are these values significant? As the observed data is ordinal in nature, the MSE and RMSE errors can be viewed as adequate, and the predictive power of the model is, therefore, acceptable. Further, the results of the ordered regression analysis are presented in Table 9.

The obtained results also included McFadden's pseudo R^2 value. Here, a value range of 0.2–0.4 would indicate an excellent model fit. In this case, for every

Table 8. Results of the OLS regression analysis.

z	β	R^2	Adjusted R^2	Stand. error	p value	F	F Sig.
BCR	0.595	0.619	0.617	0.060	<0.0001	348.085	<0.0001
PQ	0.414	0.585	0.583	0.056	<0.0001	302.195	<0.0001
BRQ	0.471	0.590	0.588	0.061	<0.0001	307.648	<0.0001

z	MSE	RMSE
BCR	1.623	1.276
PQ	1.772	1.331
BRQ	1.753	1.324

Source: Author.

Table 9. Results of the ordered regression analysis.

z	R^2(McFadden)	R^2(Cox and Snell)	R^2(Nagelkerke)
BCR	0.165	0.592	0.595
PQ	01.56	0.548	0.550
BRQ	0.156	0.572	0.575

Source: Author.

mediating construct, the McFadden's pseudo R^2 values (above 1.5) indicate a good fit. Further, the Cox-Snell R^2 values are expected to be lower compared to OLS regression values, and higher than McFadden R^2 values. Nagelkerke R^2 values represent the corrected version of the Cox-Snell R^2. What can be determined from these values? Is the model a good fit? Yes, on the basis of the obtained results. However, before the null hypothesis is rejected, a heteroscedasticity test, a t-test and a reliability test were conducted. The results of the reliability test are presented in Table 10.

The Cronbach's alpha values imply that there is an adequate consistency among the survey items, as the values are well above 0.8, and even above 0.85. So far, the OLS regression and pseudo regression values indicate an existing relationship between the observed constructs. Further, the data was tested for heteroscedasticity. The results are presented in Table 11.

In order to eliminate heteroscedasticity a Box-Cox transformation was conducted on the dependent variable. As a result both the Breusch-Pagan test and the White test indicated that there is no heteroscedasticity in this model.

Finally, the sample was split into smaller sub-samples by age, gender and education. T-tests were conducted in order to determine if there are any differences between the younger age group and older age group, between males and females, and between the group with lower educational background and higher education. In Table 12 the results of the t-tests are presented.

First, the sample was split up to a younger age group (14–30) and to an older age group (31–65). Next, the sample was split up by gender (male, female). The third split-up was based on educational background (elementary + high school, and college). Every pair was cycled through the five constructs (AD, CS, PQ, BCR, BRQ). The t-test was conducted to look for differences between these groups, in order to determine if the previously conducted analyses (regression, correlation, reliability test) are not heavily biased. Based on the obtained results, there is no statistical difference between the tested sample pairs. Further, this indicates that the chance of sample bias is lower than expected.

Table 10. Results of the reliability test.

Reliability test		
Dimension/Construct	Cronbach's alpha	Number of items
Advertising (AD)	0.93	7
Perceived quality (PQ)	0.90	4
Brand credibility (BCR)	0.87	5
Customer satisfaction (CS)	0.88	4
Brand relationship quality (BRQ)	0.84	3

Source: Author.

Table 11. Results of the heteroscedasticity analysis.

	Breusch–Pagan test	White test
LM (Observed value	0.854	5.306
LM (Critical value)	3.841	5.992
DF	1	2
p-value (Two tailed)	0.3555	0.0704
alpha	0.05	0.05

Source: Author.

Table 12. Results of the t-tests.

	Age 14–30	Age 31–65	Male	Female	ES + HS	College
Advertising (AD)	t Stat: 0.0407		t Stat: −0.00075		t Stat: 0.508	
	t Critical two-tail: 1.976		t Critical two-tail: 1.971		t Critical two-tail: 1.966	
Customer satisfaction (CS)	t Stat: −0.621		t Stat: −1.019		t Stat: 0.137	
	t Critical two-tail: 1.977		t Critical two-tail: 1.966		t Critical two-tail: 1.966	
Perceived quality (PQ)	t Stat: −0.264		t Stat: −0.394		t Stat: 0.172	
	t Critical two-tail:1.976		t Critical two-tail:1.967		t Critical two-tail: 1.966	
Brand credibility (BCR)	t Stat: −0.087		t Stat: −0.638		t Stat: 0.248	
	t Critical two-tail: 1.977		t Critical two-tail: 1.967		t Critical two-tail: 1.966	
Brand relationship quality (BRQ)	t Stat: 0.540		t Stat: −0.999		t Stat: 0.859	
	t Critical two-tail: 1.976		t Critical two-tail: 1.967		t Critical two-tail: 1.966	

Source: Author.

5. Discussion

5.1. Discussing the findings

The main goal of this study was to determine the influence of advertising on customer satisfaction in a transitional economy (Serbia). Additionally, perceived quality, brand relationship quality, and brand credibility were also measured and analysed. The data analysis included descriptive statistics, correlation analysis, OLS regression, ordered regression, a reliability test, and a t-test. According to the results, there is a high and positive correlation (0.671) between advertising (perceived advertising) and customer satisfaction. There is a large set of factors that can influence customer satisfaction (Muyammil et al., 2010). Certainly, perceived product quality is positively correlated with customer satisfaction (0.636). This is similar to the findings of (Hameed, 2013), where it was determined that advertising expenditure had a positive impact on customers. Overall, the correlation analysis showed a strong positive correlation between every measured construct. Now, does correlation mean causation? Not necessarily, however the theoretical background provided in section two, indicates that there is causation between this set of market factors.

The regression analysis was conducted with three approaches. First, every mediating construct was included in the regression. The Durbin–Watson statistic indicates

that there is no autocorrelation between the measured constructs. Afterwards, for every mediating construct a separate regression analysis was conducted. Finally, an ordered regression analysis was conducted where the McFadden, Cox-Snell, and Nagelkerke R^2 values indicated that the model is a good fit. Further, according to the heteroscedasticity test, there is no significant difference in variability of variables. Next, there is no indication of multi-collinearity between the observed variables. Therefore, it the null hypothesis 'H_0: Perceived advertising by customers is not in a relationship with customer satisfaction.' is rejected in favour of the alternative hypothesis 'H_a: Perceived advertising by customers is in a positive relationship with customer satisfaction.'

Even though the markets in Serbia are under the pressure of the transition process, it seems that customer satisfaction is influenced by advertising and this strong influence may be due to the vast amount of information (including ads) that is distributed through the Internet. The above mentioned assumptions are not solely based on the survey results, but incorporate information from other credible literature sources which are cited in this paper.

5.2. Contribution, implications, and limitations

After analysing and reviewing a large number of articles in this domain, it can be argued that this research contributes to the existing body of literature. How? There are few, if any, articles that address the relationship between two major market factors (advertising and customer satisfaction), in emerging economies such as Serbia. Why is this important? Analysing market factors in transition economies provide insight into these market dynamics, and provide an overview of how does a market behave in transition. Is advertising effective? Can you influence/manufacture customer satisfaction with advertising? What difference do other factors make (perceived product quality, brand credibility and brand relationship quality)? The obtained result provide answers to these questions. This study doesn't provide specific marketing tactics, but discusses the effects of advertising on customers' post-purchase experiences (satisfaction). Fellow researchers can address this paper for information on advertising influence in a transitional economy. The overall study can provide a good starting point for further research and market analysis for specific brands and product categories.

The main limitation of this study is the lack of product categories in the survey. However, this limitation is not severe and it doesn't affect the goal of the research, because product categories, and specific ad campaigns tend to have bias of ad targeting to specific interest groups.

6. Conclusion

The study addressed several market factors for a thorough analysis. Customer satisfaction is the driving force of markets and the main component of loyalty development. Here, the influence of advertising on customer satisfaction was addressed. Serbia, in its transition process, is an adequate example of transitional emerging

economies. The results indicate that advertising (perceived advertising) has a positive influence on customer satisfaction. This assumption was tested with OLS regression, ordered regression, correlation analysis, multi-collinearity statistics, heteroscedasticity test, autocorrelation test and a t-test. Age, gender and education biases were addressed. Additionally, mediating constructs were introduced. This way, several regression analyses were conducted and their results were presented in a comparative form.

For future research a specific product category should be investigated. Fellow researchers are welcomed to conduct similar research in this domain. If sufficient data is collected a meta-analysis should be conducted. Due to the complex relationships between the measured market factors it is suggested that other measuring tools should be implemented in the research process.

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